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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,825	05/29/2001	Thomas I. Insley	54605USA6B.007	6171

32692 7590 06/19/2003

3M INNOVATIVE PROPERTIES COMPANY  
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ST. PAUL, MN 55133-3427

EXAMINER
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CHAN, SING P

ART UNIT	PAPER NUMBER
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1734

16

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/866,825

Applicant(s)

INSLEY ET AL.

Examiner

Sing P Chan

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 32-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-34 is/are allowed.
- 6) ☒ Claim(s) 35 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 33-37 been renumbered 32-36 and misnumbered claim 32 is canceled.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being obvious over Insley et al (U.S. 6,524,488) in view of Hurd (U.S. 4,372,000).

The applied reference, Insley et al, has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not

claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Insley et al discloses a method of forming a filtration media. The method includes the steps of facing layers, joining the facing layer to form the channel assembly, stacking the channel assemblies to form the filtration media, (Col 8, lines 43-56) and slicing the filtration media to form the volume controlled depth. (Col 6, lines 45-52) Insley et al is silent as to the filtration media is sliced with a hot wire and fusing the adjacent layers. However, slicing material with a hot wire is well known and conventional as shown for example by Hurd. Hurd discloses a plastic molded honeycomb member is cut lengthwise with a hot wire (Col 2, lines 43-50) and used in slicing filtration media would fuse the adjacent layers.

It would have been obvious to one skilled in the art at the time the invention was made to slice the filtration media with a hot wire as disclosed by Hurd in the method of Insley et al to provide a quick and simple method of cutting and fusing the filtration media in a single step.

4. Claims 32-34 are allowed.

5. The following is an examiner's statement of reasons for allowance: The claims recite a method of forming a contoured layer channel flow filtration media. The method includes the steps of forming a contoured polymer film, joining the contoured polymer film to another polymer film to form a flow channel layer assembly, changing the flow channel layer assembly electrostaticly to form the charged filtration media, layering the charged filtration media to form the filter with multiple flow channels, and fusing the flow channel layer assembly to form the final form of the filtration media. Kalt (U.S. 4,249,919) discloses a method of forming an electrostatic filter. The method includes the steps of forming the first polymeric film into the desired shape using heat and pressure, bonding the first polymeric film to the second polymeric film to form the flow channel layer assembly, and charging the filter with an electrical circuit to filter the particle. (Col 3, line 30 to Col 4, line 50, Col 5, lines 8-15, and figures 1-5) However, Kalt does not disclose forming a flow channel layer assembly charging the flow channel layer, assembly prior to layering the flow channel layer assembly to form the filter, layering multiple flow channel layer assemblies to form the filtration media array, and fuse the assemblies to form the final filtration media array. Hurd (U.S. 4,372,000) discloses a method of forming a beehive frame. The method includes forming a honeycomb member by molding expanded polystyrene, the member is cut lengthwise with a hot wire, and sandwiching a sheet of comb foundation. (Col 2, lines 16-67) Hurd does not discloses forming a flow channel layer assembly charging the flow channel layer, assembly prior to layering the flow channel layer assembly to form the filter,

layering multiple flow channel layer assemblies to form the filtration media array, and fuse the assemblies to form the final filtration media array. A search of the prior art of record did not disclose any reference or references in combination, which recite the claimed features.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

6. Applicant's arguments, see Pages 4, line 8 to Page 5, line 9 filed May 19, 2003, with respect to the rejection(s) of claim(s) 35 and 36 under 35 U.S. C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Insley et al and Hurd. Insley et al provided the teaching of forming the channel assembly, stacking the flow channel assemblies to form the filtration media, and slicing the filtration media to the required volume controlled depth. Hurd provided the teaching of slicing or cutting a plastic member with a hot wire is well known and convention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sing P Chan whose telephone number is 703-305-3175. The examiner can normally be reached on Monday-Friday 7:30AM-12:00PM and 1:00PM-4:30PM.

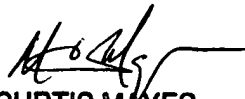
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

*Chan Sing P.*

spc  
June 13, 2003

  
CURTIS MAYES  
PRIMARY EXAMINER